AMENDMENTS TO THE CLAIMS

1. (Original) An apparatus for providing an output reference voltage across two nodes, comprising:

a voltage divider circuit that is coupled between the two nodes, wherein the voltage divider circuit is configured to provide the output reference voltage from a bandgap reference voltage, and

wherein a controllable portion of the voltage divider circuit is arranged to calibrate the output voltage by adjusting a controllable temperature coefficient of an impedance of the controllable portion in response to a trim signal.

2. (Original) The apparatus of Claim 1, further comprising a bandgap reference circuit that is arranged to provide the bandgap reference voltage across a biased portion of the voltage divider circuit.

3. (Original) The apparatus of claim 2, wherein the biased portion is at least one of: distinct from the controllable portion, at least part of the controllable portion, and overlapping with the controllable portion in part.

4. (Original) The apparatus of Claim 1, wherein the controllable portion includes at least one switch that is configured to open and close in response to the trim signal.

5. (Original) The apparatus of Claim 1, wherein the controllable portion includes a plurality of load elements, and wherein the controllable portion is arranged such that at least one of the plurality of load elements is selected in response to the trim signal.

6. (Original) The apparatus of Claim 1, wherein the controllable portion includes at least one resistor digital-to-analog converter circuit.

7. (Original) The apparatus of Claim 1, wherein the voltage divider circuit is configured to provide a current through the voltage divider circuit in response to the bandgap reference voltage, wherein the current is approximately independent of temperature.

8. (Original) The apparatus of Claim 1, wherein the adjustable temperature coefficient is a second-order temperature coefficient.

9. (Original) The apparatus of Claim 8, wherein a first-order temperature coefficient and a zeroth-order temperature coefficient of the impedance of the controllable portion are each substantially independent of the trim signal.

10. (Original) The apparatus of Claim 8, wherein the controllable portion includes at least two resistors having substantially different second-order temperatures coefficients.

11. (Original) The apparatus of Claim 8, wherein the controllable portion includes a first plurality of resistors and a second plurality of resistors, wherein each of the first plurality of resistors corresponds to a first type of resistor, each of the second plurality of resistors corresponds to a second type of resistor, a second-order temperature coefficient of the first type of resistor is substantially different from a second order temperature coefficient of the second type of resistor, and the zeroth-order temperature coefficient of the first type of resistor is substantially similar to the zeroth-order coefficient of the second type of resistor.

12. (Original) The apparatus of Claim 11, wherein the controllable portion further includes a plurality of switches, and wherein the plurality of switches and the first and second plurality of resistors are arranged as a resistor digital-to-analog converter circuit.

13. (Original) The apparatus of Claim 12, wherein the controllable portion further includes another resistor that is coupled in series with the resistor digital-to-analog converter circuit, wherein the other resistor corresponds to another type of resistor.

14. (Currently Amended) A method for providing an output reference voltage, comprising:

applying a bandgap reference voltage across a biased portion of a voltage divider circuit to provide a reference voltage; and

calibrating the reference voltage, wherein calibrating the reference voltage includes adjusting a controllable portion of the voltage divider circuit based on a trim signal, such that a zeroth-order temperature coefficient of a resistance of the controllable portion is substantially independent of the trim signal.

15. (Original) The method of Claim 14, wherein the controllable portion includes a plurality of load elements, and wherein adjusting of the controllable portion includes:

selecting a load element of the plurality that has a desirable temperature coefficient.

16. (Original) The method of Claim 14, wherein adjusting the controllable portion includes:

adjusting an adjustable temperature coefficient of an impedance of the controllable portion.

17. (Original) The method of Claim 16, wherein

the adjustable portion includes a resistor digital-to-analog converter,

adjusting the adjustable temperature coefficient includes:

providing a first trim signal to the resistor digital-to-analog converter to close at least one of a plurality of switches, and wherein

calibrating the reference voltage further includes:

sensing the output voltage at a plurality of temperatures;

determining whether the reference signal has been substantially calibrated for the adjustable temperature coefficient based on the sensed output voltage; and,

if not, providing a second trim signal to the resistor digital-to-analog converter to close another one of the plurality of switches.

18. (Original) The method of Claim 16, wherein the adjustable temperature coefficient is a second-order temperature coefficient.

19. (Original) The method of Claim 18, further comprising:

calibrating a first-order coefficient of the reference voltage, before adjusting the second-order temperature coefficient of the controllable portion.

20. (Currently Amended) An apparatus for providing an output reference voltage, comprising:

a means for applying a bandgap reference voltage across a biased portion of a voltage divider circuit to provide a reference voltage; and

a means for calibrating the reference voltage, wherein the means for calibrating the reference voltage includes a means for a controllable portion of the voltage divider circuit based on a trim signal, such that a zeroth-order temperature coefficient of a resistance of the controllable portion is substantially independent of the trim signal.

21. (New) The apparatus of Claim 1, wherein a zeroth-order temperature coefficient of the impedance of the controllable portion is substantially independent of the trim signal.